

CLAIMS

1. A video processing system, comprising:
a first video processing device comprising
- 5 an input for receiving request packets, wherein a request packet includes a stream identifier indicating a source of the data; and
- an output for sending, in response to a request packet, data packets from the source of the data to a second video processing device when data is available from the source of data at the first video processing device according to the stream identifier included in the request packet, wherein a data packet includes the stream identifier;
- 10 wherein the second video processing device comprises
- an output for sending a request packet including the stream identifier to the first video processing device when the second video processing device has memory available for data for a stream; and
- 15 an input for receiving data packets from the first video processing device and for processing the data packet according to the stream identifier in the data packet; and
- wherein the first video processing device and the second video processing device are connected by a communication medium to a packet switch having inputs for receiving packets
- 20 and outputs for sending packets, wherein request packets from the second video processing device are routed to the first video processing device and wherein data packets from the first video processing device are routed to the second video processing device.
2. The video processing system of claim 1, wherein a data packet further includes a
- 25 boundary signal portion containing a boundary signal indicative of an end of a data sample in the data packet.
3. The video processing system of claim 1, wherein a request packet includes a request
- 30 signal portion containing a request signal from the second video processing device indicating a request for transfer of an amount of valid data.

4. The video processing system of claim 3, wherein the first video processing device includes means for permitting transfer of data through the output in an amount less than or equal to the amount of valid data indicated in the request packet and for holding data in an amount greater than the amount of valid data indicated in the request packet.

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Sub 27 5. A video processing device comprising:
a memory;
an input for receiving request packets from another video processing device indicating the other video processing device is capable of receiving data, wherein a request packet includes a stream identifier indicating a source for reading data from the memory in the video processing
10 device; and
an output for sending, in response to a request packet, data packets from the source to the other video processing device when data is available from the source, wherein a data packet includes a stream identifier for the other video processing device.

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6. The video processing device of claim 5, wherein a data packet further includes a boundary signal portion containing a boundary signal indicative of an end of a data sample in the data packet.

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Sub 27 7. The video processing device of claim 5, wherein a request packet includes a request signal portion containing a request signal from the other video processing device indicating a request for transfer of an amount of valid data.

25 8. The video processing device of claim 7, further comprising:
means for permitting transfer of data through the output in an amount less than or equal to the amount of valid data indicated in the request packet and for holding data in an amount greater than the amount of valid data indicated in the request packet.

30 9. A video processing device comprising:
a memory;

an output for sending a request packet including a stream identifier indicating at least a portion of the memory to another video processing device when the video processing device has space available in the memory for data for a stream; and

an input for receiving data packets from the other video processing device and for processing the data packet according to the stream identifier in the data packet.

10. The video processing device of claim 9, wherein a data packet further includes a boundary signal portion containing a boundary signal indicative of an end of a data sample in the data packet.

11. The video processing device of claim 9, wherein a request packet includes a request signal portion containing a request signal from the other video processing device indicating a request for transfer of an amount of valid data.

12. A transceiver for processing video data and data flow control information using a packet protocol, comprising:

a transmit memory;

an input for receiving request packets from another video processing device indicating the other video processing device is capable of receiving data, wherein a request packet includes a stream identifier indicating a source for reading data from the transmit memory;

an output for sending, in response to a request packet, data packets from the source to the other video processing device when data is available from the source, wherein a data packet includes a stream identifier for the other video processing device;

a receive memory;

an output for sending to another video processing device a request packet including a stream identifier indicating a channel for writing data to the receive memory, when the video processing device has space available in the receive memory for data for the channel; and

an input for receiving data packets from the other video processing device and for processing the data packet according to the stream identifier in the data packet to store the data in the receive memory.

13. The transceiver of claim 12, further comprising:

means for connecting a first device to the receive memory to read data from the receive memory, wherein the first device issues request signals to the transceiver and wherein the transceiver transfers data to the first device when data is available in the receive memory and in response to a request signal from the first device.

14. The transceiver of claim 13, further comprising:

means for connecting a second device to the transmit memory to write data into the transmit memory, wherein the transceiver issues request signals to the second device and wherein the second device transfers data to the transceiver when data is available in the second device and in response to the request signal from the transceiver.

15. The transceiver of claim 13, wherein the means for connecting the first device to the transceiver and the means for connecting the second device to the transceiver comprises a circuit switch interconnecting the first device, the second device and the transceiver

16. The transceiver of claim 12, further comprising:

means for connecting a second device to the transmit memory to write data into the transmit memory, wherein the transceiver issues request signals to the second device and wherein the second device transfers data to the transceiver when data is available in the second device and in response to the request signal from the transceiver.

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